

Title (en)
Reciprocating dialyzer having spacers.

Title (de)
Alternierender Dialysator mit Trennplatten.

Title (fr)
Dialyseur à va-et-vient muni de plaques intercalaires.

Publication
EP 0051458 A2 19820512 (EN)

Application
EP 81305141 A 19811029

Priority
US 20434280 A 19801105

Abstract (en)
A reciprocating dialyzer is described for use as an artificial kidney or other extracorporeal mass transfer device. A dialyzer unit includes a membrane package having an aligned pair of thin semi-permeable membranes forming a chamber between the interior faces to receive fluid (such as blood) to be treated, and spacing elements in dialysate chambers at the exterior faces of the membranes which contact the membranes and limit their expansion, while allowing chemical transfer to the dialysate slurry. A plurality of such treatment units received between spaced plates comprises a dialyzer. Blood flow into and out of the membrane packages is through a central conduit, with free slurry being introduced and withdrawn from the dialysate chamber at the periphery of each unit. The spacing elements are flexible and of plastic with molded, porous or mesh material modified to provide central and rim seals as well as membrane engaging faces designed to limit membrane displacement and cause formation of a thin blood column while not unduly masking the membrane surfaces and allowing slurry flow at all times including when the blood chamber is filled with blood. Certain spacing elements also allow emptying of blood from the dialyzer without need for positive pressure on the fluid outside the dialyzer.

IPC 1-7
A61M 1/03; **B01D 13/00**

IPC 8 full level
A61M 1/22 (2006.01); **B01D 63/08** (2006.01); **A61M 1/26** (2006.01)

CPC (source: EP US)
A61M 1/267 (2014.02 - EP US); **B01D 61/28** (2013.01 - EP US); **B01D 63/084** (2013.01 - EP US); **A61M 1/26** (2013.01 - EP US)

Cited by
US5068236A

Designated contracting state (EPC)
AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)
EP 0152640 A2 19850828; **EP 0152640 A3 19860903**; AT E22012 T1 19860915; AU 7708081 A 19820513; CA 1173760 A 19840904; DE 3175311 D1 19861016; EP 0051458 A2 19820512; EP 0051458 A3 19820922; EP 0051458 B1 19860910; ES 506855 A0 19830301; ES 8304440 A1 19830301; JP S57107164 A 19820703; US 4348283 A 19820907

DOCDB simple family (application)
EP 84201368 A 19811029; AT 81305141 T 19811029; AU 7708081 A 19811104; CA 389439 A 19811104; DE 3175311 T 19811029; EP 81305141 A 19811029; ES 506855 A 19811104; JP 17628881 A 19811102; US 20434280 A 19801105